

Appl. Serial No. 09/846,797  
Amendment dated Dec. 16, 2003  
Reply to Office Action of Aug. 12, 2003

### **REMARKS**

Applicants acknowledge receiving the Office Action mailed August 12, 2003 (Paper No. 12).

Claims 13 and 15-38 will be pending in the Application following entry of this Amendment.

Claims 13, 17, 19 and 21-25 have been allowed. The Examiner further indicated that withdrawn Method Claims 26-36, previously amended to incorporate all of the limitations of Composition Claim 13, would be rejoined upon finding Group I claims allowable.

Certain of the pending claims are amended herein. Claim 16 is amended to clarify that a probe which "consists" of a particular sequence does not include an optional sequence that is recited as an element in the claim from which it depends. Claims 25 and 35 are amended to delete the recitation of sequences which the Examiner identified as non-elected subject matter. Claim 37 has been amended to delete the recitation of language which the Examiner found indefinite, and new Claim 38 is added to recite certain claim elements deleted from Claim 37.

Entry of this Amendment is respectfully requested.

### **The Objection to Claims 15-16, 18, 20, 25 and 35**

Claims 15-16, 18, 20, 25 and 35 have been objected to as being of improper dependent form for failing to further limit the subject matter of a previous claim. The Examiner suggested canceling the relevant claims, amending the claims to place them in proper dependent form, or rewriting the claims to independent form.

Claim 15

The Examiner has pointed out that Claim 13 recites an oligonucleotide probe having the length and sequence of SEQ ID NO:1 or 5, and that dependent Claim 15 recites that the oligonucleotide probes of Claim 13 comprise DNA, something which does not, at first blush, seem a further limitation.

Applicant requests reconsideration and withdrawal of the objection to Claim 15 for the following reasons. Reviewing the definitions of “oligonucleotide” (see Specification at page 5) and “oligonucleotide probe” (see Specification at page 6) should clarify that Claim 13 is drawn to a nucleotide polymer which may include a modified backbone structure. Under the description of the “Chemical Structure of Oligonucleotides” that appears on page 14 of the Specification there is a description that “oligonucleotide probes... embrace polymers of native nucleotides as well as polymers that include at least one nucleotide analog” (see Specification, page 14 at lines 25-28). Exemplary analogs that can be used are described in the following paragraph (see the paragraph bridging pages 14-15). Accordingly, allowed Claim 13 embraces molecules having DNA or other backbone structures.

Although the sequence of bases which make up SEQ ID NOs:1 and 5 are found in native DNA, the present invention also embraces these sequences of bases disposed on alternative backbones, a feature which is inherent in Claim 13. Claim 15 further limits Claim 13 by specifying that the probe comprises DNA, rather than an alternative backbone scaffold for attachment of the recited base sequences. In light of this clarification, Claim 15 should be viewed as further limiting the claim from which it depends, and so complies with the requirement of § 1.75(c).

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Claims 16, 18 and 20

Dependent Claim 16 has been objected to because it appears to the Examiner that there is no further limitation of the claim from which it depends. More specifically, the Examiner has pointed out that Claim 13 recites an oligo probe having the length and sequence of SEQ ID NO:1 or 5, and that Claim 16 recites as a limitation that the oligo consists of, meaning that it has exactly the sequence of, SEQ ID NOs:1 or 5. Dependent Claim 16 has been amended to specify that the sequence of the oligo probe does not include the optional “non-complementary sequence” which finds antecedent basis in Claim 13. This amendment should clarify that Claim 16 further limits Claim 13. Accordingly, the objections to Claim 16, as well as Claims 18 and 20 which depend from Claim 16, are believed obviated, and withdrawal of the objection to Claims 16, 18 and 20 is appropriate.

Claim 19

Applicant notes that the objection to Claim 19, based on its dependence from Claim 16, is in error because Claim 19 actually depends from Claim 17, which in turn depends from Claim 13. Accordingly, withdrawal of the objection to Claim 19 is appropriate.

Claims 25 and 35

Claims 25 and 35 have been objected to because they are drawn to non-elected subject matter. These claims have been amended to delete the recitation of helper oligonucleotide sequences other than SEQ ID NO:4, thereby obviating the basis of the objection. Accordingly, withdrawal of the objection to Claims 25 and 35 is appropriate.

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**The Rejection Under § 112, Second Paragraph**

Claim 37 has been rejected under 35 USC § 112, second paragraph as being indefinite in the recitation of "confers a secondary structure" and "confers a tertiary structure." Claim 37 has been amended to recite simply that the oligonucleotide probe includes the non-complementary sequence which finds antecedent basis in Claim 13. New Claim 38 has been added to particularly recite a promoter sequence and a restriction endonuclease recognition site as two alternatives for the non-complementary sequence. Deletion of the language which the Examiner found confusing should render the claims clear and definite. Withdrawal of the rejection under § 112, second paragraph is requested.

**CONCLUSION**

In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of all outstanding objections and rejections are respectfully requested. Allowance of the claims at an early date is solicited. If any points remain that can be resolved by telephone, the Examiner is invited to contact the undersigned at the telephone number shown below.

Respectfully submitted,

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Dated: December 16, 2003

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